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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,046	04/26/2001	Toshitaka Shibata	14998.270	8913

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EXAMINER

BELLAMY, TAMIKO D

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.	Applicant(s)	
09/843,046	SHIBATA ET AL.	
Examiner	Art Unit	
Tamiko D. Bellamy	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Amendment dated 9/10/04 has been received and entered. Claim 2 has been canceled.  
Claims 1, and 3-9 are currently pending.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-7, 8/1, and 9 are rejected under 35 U.S.C. 103(a) as being obvious over Nomura et al. (5,948,991) in the view of Shah (5,948,991).

With respect to claim 1, Nomura et al. discloses in Figs. 3, 8 5, and 15 a base (e.g., block 122), a pressure injection section (e.g., pressure introduction hole 30a), and a lead (16) connected to a pressure-sensitive section (e.g., sensor chip 11). The device of Nomura et al. discloses the pressure sensitive element (e.g., sensor chip 11) is fixedly adhered onto a base (e.g., resin block 3) by a resin adhesive agent (14) (col. 4, lines 21-24). Nomura et al. also discloses a pressure-sensitive section (130) enclosed by a sensor package (133, 137). Nomura et al. lacks the detail of the affixing a pressure-sensitive section to a base by the use of a fluoroc elastomer. Shah discloses the use of a fluoroc elastomer (e.g., bonding adhesive such as thermoplastic 27 (see col. 2, lines 33-35)) to bond together a pressure-sensitive section (e.g., sensing chip 26) to a base (e.g., housing 12). Therefore, to modify Nomura et al. by employing a fluoroc elastomer would have been obvious to one of ordinary skill in the art at the time of the invention since Shah

teaches a pressure sensor having these design characteristics. The skilled artisan would be motivated to combine the teachings of Nomura et al. and Shah since Nomura et al. states that his invention is applicable to pressure sensor for detecting pressure intake in an engine and Shah is directed to pressure sensor unit.

With respect to claim 3, Nomura et al. discloses in Fig. 8 a gel-like silicon resin (132) that covers the pressure-sensitive section (e.g., pressure sensor chip 130) (col. 7, lines 24-28, col. 9, lines 38-46). Nomura et al. also discloses a lead (131) connected to the terminal of the pressure-sensitive section (130) (col. 10, lines 1-8). As depicted in fig. 1, the lead (131) is connected to the base, and the gel-like silicon resin (132) covers a portion of lead (131) and covers all of the pressure-sensitive section (e.g., pressure sensor chip 130).

With respect to claim 4, Nomura et al. discloses in figs. 3 and 6 a gel-like protective member (15) on the pressure-sensitive section (e.g., sensor chip 11). The gel-like is from the silicone resin group (15/132) (col. 7, lines 26-28). Nomura et al. does not specifically state the use of a fluoric gel. However the court held in, In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), that selection of a known material based upon its suitability for the intended use is a design consideration clearly within the preview of one having ordinary skill of the art. Therefore, to modify Nomura et al. on a fluoric gel would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches its use on pressure sensor for detecting pressure intake in an engine that includes a gel-like protective member on the pressure-sensitive section (e.g., sensor chip 11).

With respect to claims 5-7, Nomura et al. discloses in figs. 3 and 6 a gel-like protective member (15) on the pressure-sensitive section (e.g., sensor chip 11). Nomura et al. also discloses that the pressure sensitive element (e.g., sensor chip 11) is fixedly adhered onto a base (e.g., resin block 3) by a resin adhesive agent (14) (col. 4, lines 21-24). The gel-like protective member is from the silicone resin group (15/132) (col. 7, lines 26-28). Nomura et al. does not specifically state that the fluoric elastomer is harder than the fluoric gel. discloses the use of a gel-like resin that covers the pressure sensor chip. Nitta also discloses that the such as silicone that comes to a gel-like state after curing. Shah discloses the use of a fluoric elastomer (e.g., bonding adhesive such as thermoplastic 27 (see col. 2, lines 33-35)) to bond together a pressure-sensitive section (e.g., sensing chip 26) to a base (e.g., housing 12). The teachings of Shah clearly infer and/or suggest the use of fluoric elastomer that is harder than a fluoric gel. Therefore, to modify Nomura et al. by employing a fluoric elastomer that is harder than a fluoric gel would have been obvious to one of ordinary skill in the art at the time of the invention since Shah teaches a pressure sensor having these design characteristics. The skilled artisan would be motivated to combine the teachings of Nomura et al. and Shah since Nomura et al. states that his invention is applicable to pressure sensor for detecting pressure intake in an engine and Shah is directed to pressure sensor unit.

With respect to claims 8 and 9, Nomura et al. discloses a pressure sensor (121) used for detecting an air intake of an engine (col. 6, lines 9-19).

***Response to Remarks***

Art Unit: 2856

4. Applicant's arguments with respect to claims 1, and 3-9 have been considered but are moot in view of the new ground(s) of rejection. It is the examiners position that claims 1, and 3-9 are not patentable over the newly applied art of Nomura et al. in view of Shah.

### ***Conclusion***


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (571) 272-2190. The examiner can normally be reached on Monday - Friday 6:30 AM to 12:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamiko Bellamy

T.B.  
October 20, 2004

  
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